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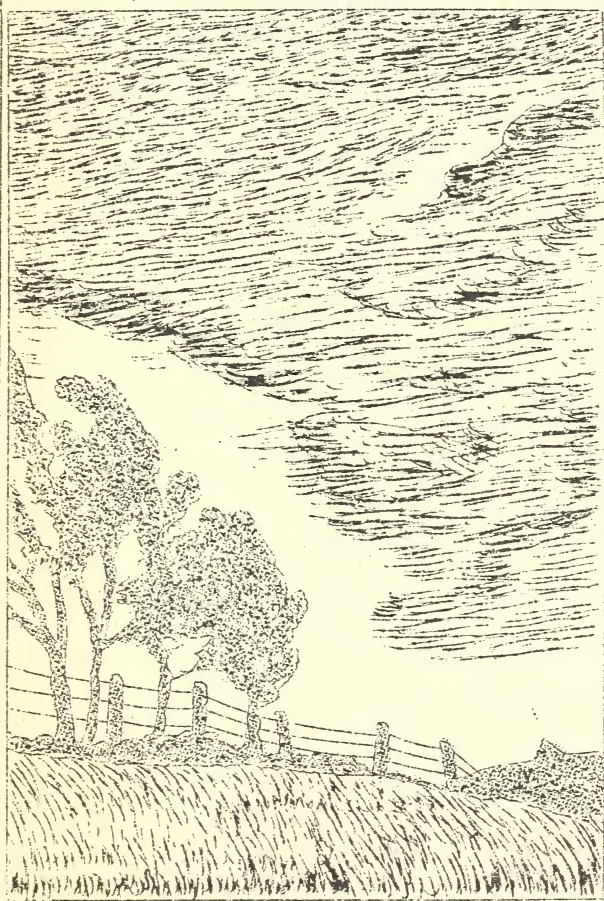
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Apr 18 1935 Vol 1 No 9

THE TARHEEL WASHOFF

APRIL



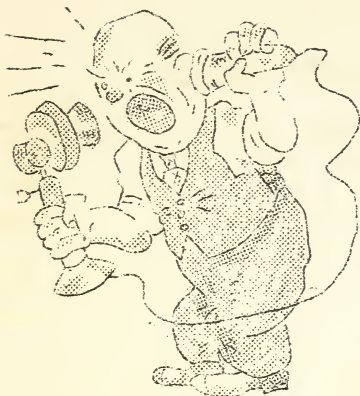
REGIONAL DIRECTOR'S MESSAGE

SPRING -- THE SEASON FOR PLANNING, plowing, and planting -- is here. The Soil Erosion Service, which is witnessing its second season in the Deep River area, but which is just getting started in the Reedy Fork area, hopes to play a great part in carrying out the plans of the farmers of these sections this Spring. Our offices in High Point and Greensboro are open at all times to the landowners we are delegated to serve. We shall attempt to discuss whatever plans and problems the people wish to bring to us. The landowner's cooperation in putting across the erosion control and land use programs is sought and always respected.

COOPERATIVE AGREEMENTS, covering over 1100 farms, representing 62% of the land in the Deep River area, have been signed since the inception of the program. More remarkable still is the rapidity with which the farmers of Reedy Fork are signing up for cooperation in the Soil Erosion Service program. Approximately $1/3$ of the farmers of Reedy Fork have come under agreement, while the program has been in effect less than two months.

THE FIGHT TO CONTROL EROSION has just begun! It is a hard fight which requires much energy and patience to win. But the Soil Erosion Service, with the whole-hearted cooperation of the farmers with whom we are working, intends to conquer the enemy-EROSION. WE ASK YOUR ASSISTANCE AND SUPPORT.

....J. H. Stallings
Regional Director



MAY RESUME AGREEMENTS

Although nothing definite has been decided, there is a likelihood that at the close of the rush planting season, in the latter part of April, the Soil Erosion Service will be able to work up more cropping plans with those farmers and land-owners of the Deep River area

who show an interest in the program. Due to the proposed plans for the extension of the Soil Erosion Service program proper and the Civilian Conservation Corps, it may be necessary to discontinue working out agreements about the end of May. During that four-week period, however, it is possible that the majority of farmers who have not already done so can sign up with the Soil Erosion Service program.

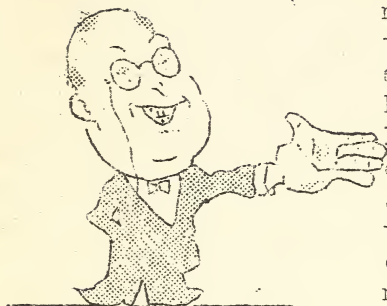
Those who have not signed cooperative agreements should get in touch with the High Point office as early as possible in order to be taken care of before the period of signing agreements is again closed. The Soil Erosion Service would like to see all the farmers in the area cooperating with the program, but the policy of "first come first served" will be adhered to rigidly in this matter.

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PEACE RULES THE DAY when reason rules the mind. -----Collins

POLITENESS GOES FAR, yet it costs nothing.
Can we afford it?-----Anonymous

MAURER'S MESSAGE



THERE IS ONLY a comparatively small number of the many factors entering into the production of a profitable crop which the farmer himself can control absolutely. Where there are floods, drought, weeds, and poor soil, it is essential that the farmer take all precautions to eliminate as many of these hazards as possible.

THE PLANS BEING WORKED OUT on farms in the Reedy Fork area will reduce many of the hazards to a minimum. Rotations once established make a systematic business of farming. Rotations also help to increase the water-holding capacity, thereby reducing the disastrous effects of drought. The increased water-holding capacity also reduces the ravages of flood waters. There is not as much free water to accumulate and go on a rampage down your branch to wash out bridges and flood bottoms where you probably have your best corn prospects.

STRIP CROPS AND MECHANICAL STRUCTURES promote beneficial results from the rains and direct and control excess water. Fertilizer that is used on land that is cropped in rotation also produces better results. Each succeeding crop gets the benefit of what remains from the preceding crop. The increased root and top growth to be turned under increases bacterial activity which in turn increases the effectiveness of the commercial fertilizer used.

WELL SODDED PASTURES produce longer grazing periods for more cattle; the cattle produce larger quantities of higher grade milk; the health of the children is better and resistance to disease is greater. The sodded pastures absorb and hold great quantities of water, and less water runs off as excess. The reforested area starts building and conserving the soil and moisture. Vines and shrubs do the same for gullies.

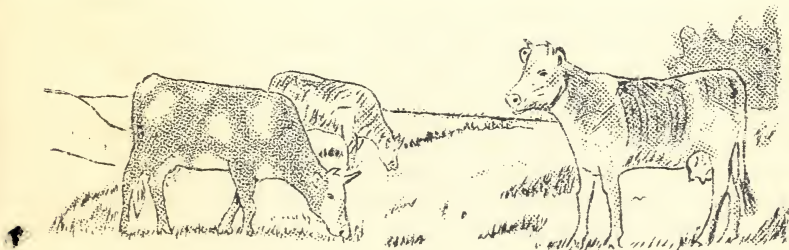
THE SOIL EROSION SERVICE in helping you to conserve and improve your soil is building a foundation for a prosperous community, and a happy and well-contented people.

T. C. Maurer.....
Acting Asst. Reg. Director

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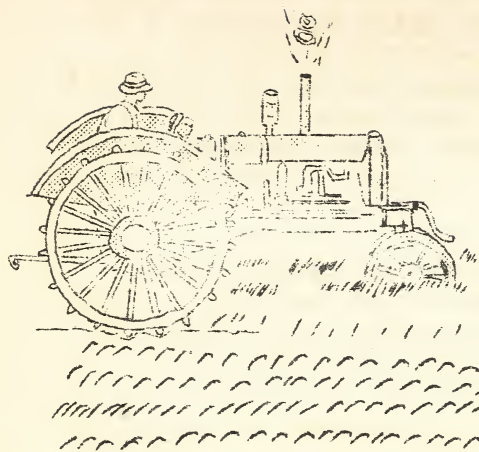
MARCH MUCH MOIST

OLD WINDY MARCH had 19 rainy days in 1935. Eleven of the last fifteen of those days were rainy. The total rainfall for the month was 6.52 inches. The average rainfall for the month of March over the last 53-year period is 4.36 inches. In March, 1903 there were 7.93 inches of rainfall, and the lowest rainfall for March was in 1905, when only 1.33 inches of rain fell.



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REEDY FORK TERRACES



TERRACING WORK

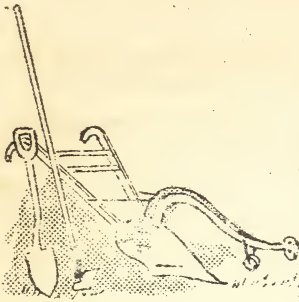
was begun on the Reedy Fork project just one month ago. Although progress has been greatly retarded by incessant rains, the engineering department has completed to date over $8\frac{1}{2}$ miles of terraces on 10 farms located at various points in the area.

IN ADDITION TO THAT, about 43 miles of terrace lines have been staked out for strip-cropping and approximately 2500 feet of terrace outlet channels have been completed.

ALL THE NEWLY-CONSTRUCTED terraces withstood the extremely heavy rains of the past month, which is a real test in view of the fact that more than seven inches of rainfall were recorded during the period. Of this total several were rains of very high intensity, as much as 1.76 inches having fell in a twelve-hour period.

SUCH RAINS AS THOSE described above accelerate erosion greatly because the soil cannot absorb the moisture readily enough, and the greater part of the water runs off down the slope, carrying the valuable topsoil with it. Unless the land is protected by terraces or by a sufficient vegetative cover, the condition of soil-wash due to heavy rains is much greater.

AGRONOMY

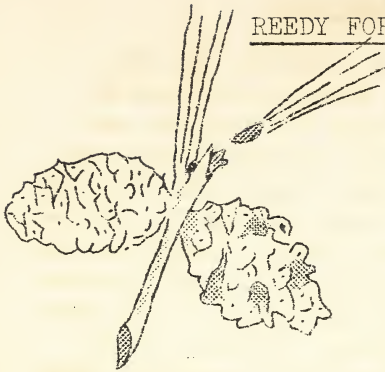


NO GREATER PROBLEM faces Reedy Fork farmers than that of planning and adopting suitable crop rotations. Upon this depends to a large extent the maintenance of the fertility of the soil. Fertile soil is the basis for profitable agriculture, which in turn means the permanent prosperity of the farmer. Farmers of the Reedy Fork area are urged to adopt suitable crop rotations.

A SUITABLE ROTATION CALLS FOR the culture of grasses, clover, lespedezas, and other legumes which will add organic matter and nitrogen to the soil, thereby improving its chemical and mechanical condition, and also increasing its water-holding capacity. The grasses and legumes are known as the close-growing or soil-binding crops. Their roots bind and hold the soil together, thus decreasing to a minimum the loss of soil by washing or runoff. A ride through the Reedy Fork area brings into view many gullied and sheet-eroded hillsides accompanied by many acres of fast filling bottom lands. This is proof that soil-saving crops should be grown.

A CROPPING PLAN THAT INCLUDES soil-binding crops is being planned by our cooperative agreement men for each of the individual Reedy Fork cooperators, all of whom have shown a real appreciation for the adoption of soil-binding crops in the rotation for their farms.

REEDY FORK FORESTRY OPERATIONS



THE FORESTRY DEPARTMENT of the Reedy Fork project has planted about sixty-five thousand tree seedlings on approximately forty-five acres belonging to twelve cooperators.

Most of this has been confined to the planting of gullied and galled areas with black locust, because loblolly pine seedlings were not available. A total of 40,000 black locust seedlings have been planted; the remainder consisted of ash, Chinese elm, walnut, tulip, poplar, red cedar and a few soap-berry and Chinese tallow trees.

IT IS OUR INTENTION to plant the faster-growing, more desirable loblolly pine seedlings on land that has been removed from cultivation.

IT IS GRATIFYING TO NOTE the cooperation many farmers have given the men writing agreements in removing pasturing from woodlands and in assigning trees to numerous fields removed from cultivation. However, a large percentage of the woodland is still being pastured and it is hoped that these cooperators will realize the futility of ever obtaining suitable pasturage or timber growth from such areas. It has been definitely proved that pasturing and forestry are mutually disadvantageous.

THE SLIGHT AMOUNT OF GRASS found in woodland pastures is less nutritious than the grass grown in the open. The effect of grazing upon the soil and upon the trees is easily seen in a comparison of

of grazed and ungrazed woodlots. In the former the soil becomes packed and the trees are injured, thus allowing entrance to destructive fungi and insects. Litter and humus are destroyed and there is a complete absence of an understory of desirable reproduction.

A PRELIMINARY SURVEY shows that there is much work to be done in forest management, and it is hoped that such measures can be instituted in the near future.

IN THE MEANTIME cooperate with the Soil Erosion Service by removing all steep slopes and severely eroded, worn-out fields from cultivation and use the surest means of erosion-prevention and control-----
PLANT TREE SEEDLINGS!

WILDLIFE IN REEDY FORK AREA

A MIXTURE OF LESPEDEZA, orchard grass, red top and Italian rye grass is being sowed on areas devoid of vegetation in order to establish a sod that will check erosion and also serve as a food and cover for quail. On some places Korean lespedeza alone has been sowed with the necessary proportion of fertilizer.

IN ADDITION TO SEEDING, several thousand coral-berry plants, privet and bush lespedeza have been planted in gullies, large and small.

SHRUBS HAVE PROVED their inestimable value in their comparatively quick action in controlling erosion. Consequently, we expect to use them extensively in this area. With the spreading root system and hardness of coral-berry the soil en route to the streams is afforded an excellent anchor. Large quantities of berries are produced by both privet and coral-berry, which are eaten by quail and other birds.

FINDINGS OF SOIL EROSION SURVEY

THUS FAR IN THE REEDY FORK AREA a little over fifty percent of the farms have been surveyed in detail. The purpose of this soil erosion survey, as has been stated in a previous article in this booklet, is to give a picture of existing conditions on each farm in the area.

BY STUDYING THE FARMS SURVEYED we find that many farmers are sub-soil farmers. Any farmer that tries to earn a livelihood on subsoil is licked in the very beginning. If he is not bankrupt now, it is only a matter of time until he will fall into the hands of a receiver. The sad part is that year after year more farmers are being forced to join the sub-soil farmer group -- due to losses from erosion!

EVERY FARMER SHOULD ASK HIMSELF these questions: What am I doing to reduce erosion on my farm? Is my farm as fertile and productive as it was when I began farming it? Are there more gullies on my farm now than there were ten years ago? Am I farming subsoil? Or am I farming good surface soil?

THE FARMS THAT HAVE BEEN SURVEYED show that most of the land in the Reedy Fork area has been cultivated at some time. Most of the land now in forests is only subsoil and gullies. This tells its own story. The land was so badly eroded, unproductive, difficult to cultivate and worthless to the farmers that they were compelled to turn it out to grow up in pines, hoping that they would help hold the world together.

IN BUT VERY SMALL AREAS do we find virgin soil. If the farmer should want to clear new land or increase the cultivated acreage on his farm, where would he find a desirable field in an old pine thicket

that is filled with gullies, with little or no surface soil left? To make it more difficult, many of the farmer's neighbours are in the same boat. His only hope is to save the soil he has and put forth every effort to make it more fertile and productive.

APPROXIMATELY FIFTY PERCENT of the surface has been removed from the cultivated land in the Reedy Fork area due to erosion. This does not mean that every field has fifty percent of the surface soil removed. Neither does it mean that no fields have more than fifty percent of the surface soil removed. It is an average for all the open land in the area.

IN PLACES ALL OF THE surface soil has been removed. This does not complete the picture. Over fifteen percent of all the land in the Reedy Fork area has been abandoned due to gullying. Fifteen acres out of every one hundred in the area are practically worthless.

EVERY LAND OWNER IN THIS AREA has lost soil due to erosion. It can be checked and not allowed to go further. Will you do your part? Or will you eventually become a subsoil farmer? You have the choice!



SAVE SOIL



EDITORIALS

THE TARHEEL WASHOFF

Published monthly by the Soil Erosion
Service, Department of Agriculture.

Deep River and Reedy Fork Areas.
Federal Building--High Point, N. C.

Regional Director--Dr. J. H. Stallings
Editor--Forney A. Rankin

Contributors--SES Staff Members

VOLUME I April 15, 1935 NUMBER 9

THE SEEMINGLY UNLIMITED SUPPLY of natural resources, a government that guaranteed political, religious and commercial freedom, and the inherent characteristics of the race that settled this country probably account for the spirit of careless wastefulness that imbued the early American that we today - in this land that was once a cornu copia, are compelled to grope for an economic

system that will afford sustenance for our citizenry. Forests were slaughtered and burned to clear new lands for cultivation. When after a few years land became infertile, the owner would leave it and move to another location where land was plentiful.

BECAUSE OF THE WASTEFUL SPIRIT of our fathers, we are today paying the penalty. Forests that once covered a great part of our land were thoughtlessly felled, leaving the land open to torrential rains, which as time passed on cut great gashes in the earth. Floods, poor soil, drought, wind storms, clogged reservoirs, dust storms and a general pitiful agricultural system are the results. The rugged hillsides which we see about us are sad reminders of the blunders of our predecessors. A sad story of economic, social and political upheaval is indirectly related to this wholesale butchery of the soil; for practically all of our natural resources have their origin in the land, and the livelihood and happiness of any people depend on the resources from which they derive physical health and development.

UNLESS PROPER MEANS OF controlling and preventing erosion are established, ours will be a land of subsoil farming. In North Carolina the Soil Erosion Service is attempting to remedy the erosion problem. It has been proved that the solution to the problem lies in the use of vegetative cover to hold the soil in place and to protect our streams from floods by holding the water on the land. Forests and well-sodded fields offer the best means Nature has yet provided for the prevention of erosion. In a forested area the conditions in the ground are such that surface run-off is greatly reduced, and the water that DOES run off carries with it very little of the soil.

KUDZU FOR EROSION CONTROL

"WITH THE EMPHASIS THAT IS BEING placed on vegetation as a means of erosion control, the question of what to plant for this purpose becomes one of major importance. As a general principle, no plant should be used which will not produce something of value to the owner of the land. With the possible exception of sod used in terrace outlets, all plantings made for erosion control will be appreciated by farmers in direct proportion to their usefulness for other purposes. Shrubs or vines that merely stabilize gullies, but have no value as forage or timber will not add materially to the popularity of erosion control work. If, on the other hand, the plants used satisfy a definite need on the farms, they will serve to popularize the work with farmers and landowners.....

"THE VALUE OF KUDZU for erosion control is due in large measure to its habits of growth. Runners grow to a length of as much as 50 or 60 feet. These runners take root at the nodes and establish new plants. This is a very important characteristic where Kudzu is to be used for gully control or for covering badly-eroded areas along shallow gullies where the topsoil has been washed away. The plants can be set in rich soil several feet away from the gully or bare area, as may be desired, and they will spread to the areas to be protected. Kudzu runners climb down vertical banks and even cross gullies, whereas the runners of most other vines tend to grow upward and, therefore, do not cover gullies as effectively. No other plant is available that can be depended upon to spread as far from the original plant."

R. Y. Bailey, Regional Director
Alabama Project in "THE LAND
-13-TODAY AND TOMORROW".....

SEED DISTRIBUTION

AS THE SPRING SEEDING SEASON draws to a close the Soil Erosion Service announces that 353,382 pounds of seed, including lespedeza, pasture mixtures, clover mixtures, red clover, red top grass and hay mixtures, have been distributed among the farmers of the Deep River erosion-control area. Approximately 9,900 acres have been seeded in the Deep River area.

THE FEDERAL GOVERNMENT through the Soil Erosion Service furnishes seed to all farmers cooperating with the erosion-control movement, which are to be used only as erosion-control measures. Land that is retired from cultivation, terraces, severely eroded areas, and gullies are seeded down with government-supplied seed. Such seed is also used in crop rotations and in strip cropping.

ACCORDING TO EXPERIMENTAL RESULTS obtained from twelve experimental stations located in twelve different sections of the country, on as many soil types, thick-growing crops retained sixty-five times more rainfall on hillsides than on land that is planted to clean-tilled crops. At the Missouri Experiment Station it was found that clean-tilled crops allowed more than fifty nine tons of soil less per acre annually more than thick-growing crops.

THE FIGURES FURNISHED ABOVE, when applied to the seed distribution in the Deep River area, prove that seed covering 9,900 acres of land would save 582,507 tons of soil annually.



STRIP CROPPING

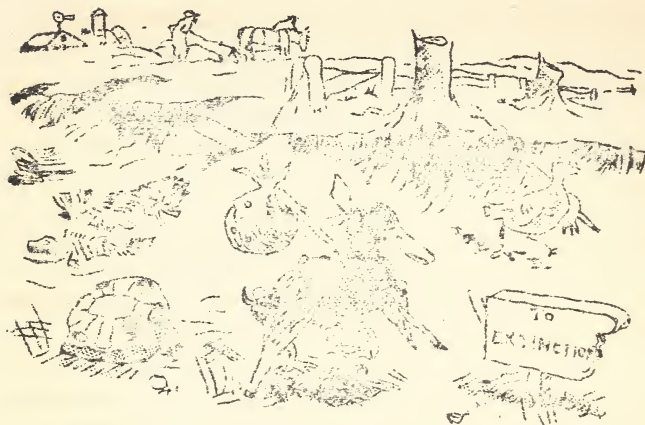
THE MOST EFFECTIVE practice of strip-cropping is simple and requires no extra work. First, run the contours with the same vertical fall as the terraces, without any grade. On each side of this contour plant six or eight rows, depending on the slope of the land.

THE AREA BETWEEN THE ROWS planted on the contour line should be seeded to some close-growing crop such as lespedeza or small grains. The advantage of such a system is that all row crops are approximately on the contour, which will carry the water falling there while the area off the contour is seeded down to a close-growing crop. Consequently, little erosion on the field results. Point and short rows are also eliminated.

HOW, THEN, MAY THE STRIPS BE ROTATED with the row crops? The answer: When the area between the contours is to be in a row crop, there must be another contour run between the existing contour. This will give a contour line for every foot-and-half fall, if a three foot fall is used.

CONTOURS CAN BE MAINTAINED by a back furrow, or dead furrow. After the system is started, say over a three year rotation, every other contour will be in a row crop for two years, while the other will remain in a close-growing crop. The best close-growing crop for this purpose is lespedeza. It will always follow small grains, and then remain on the ground the second year. The small grain can be harvested and the lespedeza mowed for hay.

ADVANTAGES OF WILDLIFE CONSERVATION



THE DAY OF plenty of game for everybody at any time has passed. If there is to be any game for hunting in the near future there must be provided some

plan of managing game as a crop. Whether this crop is harvested by selling hunting rights or is realized by providing hunting for the farm people and their friends, or is desirable because of the farmers' interest in birds, the fact remains that the successful continued production of wild animals must be considered in the same light as other livestock. In addition to providing food, cover and protection, a successful breeding stock must be retained to restock fully each successive year the farm properties.

PRIOR TO THE FORMATION of the Soil Erosion Service, at least two agencies had realized and demonstrated the possibilities of using wildlife developments to protect the soil from washing away. Herbert L. Stoddard, the best known authority on wildlife in America, in his book - "THE BOBWHITE QUAIL, ITS HABITS, PRESERVATION AND INCREASE"-says: "Curiously erosion, which is a serious enemy of the farmer over most of the Piedmont, is indirectly becoming an increasingly important ally of the quail in its fight for existence. To check erosion as gullies and 'washes' develop, brushy thickets are allowed to grow up around them, and these offer ideal cover for quail. If additional areas also are planted around

the thickets with the erosion-resisting Japan clover (*Lespedeza*), both food supply and shelter will be afforded for the game birds. Such measures may be profitably adopted wherever destructive erosion starts. Terracing the land may be made to favour the quail if cover is permitted to grow on the terraces."

AN IOWA STATE FISH AND GAME Commission publication, "Management of Upland Game Birds in Iowa", gives an excellent illustration of how gullies may be controlled and prevented from forming. Notice the picture at the beginning and the one at the end of this article. Which do you desire? You may have either.

TO EXTINCTION MIGHT BE THE PLIGHT of many of our game, song and insectivorous birds and other desirable animals. To the ocean is the plight of our valuable agricultural soils, without the proper erosion-control measures. Agriculture will gradually be forced out under these conditions. First picture.

THE OTHER PICTURE IS TO CONSERVE the soil by proper cropping methods, a well-balanced land use, vegetative-control, and terracing.

THIS PICTURE shows better crops with less acreage and a wider variety of farm income, birds, animals, clearer streams and constant water supply.



DOMINANT SOILS IN SES AREAS

The Cecil Soils

DESCRIPTION: The subsoil in the Cecil series is a compact, heavy, but not tough, red clay. Usually there are some angular quartz particles and varying amounts of mica flakes present. The Cecil is divided into types on the basis of texture or degree of fineness of the surface soil. We have six different types ranging from sandy loam to clay loam. These are sandy loam, fine sandy loam, gravelly sandy loam, loam, clay loam, and mixed phase of sandy loam. In virgin wooded areas the sandy types have a dark gray surface layer 1 to 2 inches deep, and a gray to brownish-gray layer to a depth of 5 to 9 inches. Underlying this is a yellow-red sandy clay layer which extends to depths varying from 10 to 15 inches, where the red clay subsoil is encountered. In undisturbed timber Cecil loam has a grayish-brown to brownish-red, very fine sandy loam to heavy loam surface which varies in depth from 4 to 8 inches. The gravelly sandy loam contains a great quantity of rock fragments, in addition to the sandy material. In virgin forest tracts the clay loam is brownish-red in surface color and contains very little or no sandy material. All of these types may be darker in color or more reddish under cultivation. The mixed phase of sandy loam is largely a product of erosion, and is very "spotted," there being so many small areas of sandy loam and clay loam that a separation is not possible.

DERIVATION: Formed chiefly from schist and from gneiss, granite, and related rocks.

OCCURRENCE: Throughout the Reedy Fork and in northern part of Deep River area.

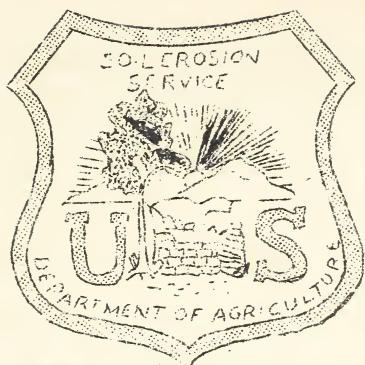
TOPOGRAPHY: Varies from almost level to hilly and broken. The greater part ranges between 5% and 15% in slope.

★ FERTILITY: Chemical analyses by the North Carolina Experiment Station indicate that Cecil soils are low in content of nitrogen and phosphoric acid, and relatively high in potash content. The clay loam has a higher percentage of nitrogen and phosphoric acid than the sandy types, but less potash. Field experiments, however, indicate that a complete fertilizer is generally required on these soils for best results. The Cecil types are strong soils and may be kept in a high state of fertility. They are generally rather acid, and applications of lime are essential for strong plant growth, and for improving the physical properties of the soil.

CROP ADAPTATION: The sandy types are excellent truck and tobacco soils. The type of tobacco produced is somewhat darker in color and of heavier body than on soils with more open subsoils. The clay loam and loam are very good small grain, clover, alfalfa and corn soils. The mixed phase is a good general farm soil, but it is not recommended for tobacco. The gravelly loam in most places contains too much rock material to be successfully cultivated.

DEGREE OF EROSIVENESS: All the Cecil soils except the gravelly type are subject to rather severe sheet and gully erosion. The clay loam and loam are more susceptible to sheet erosion than the sandy types.

★ CONTROL MEASURES: The Cecil soils, except the gravelly type, lend themselves readily to all means of erosion control. Broad and narrow strip-cropping, terracing, contour tillage, rotations, and Winter cover crops may be used effectively.



COOPERATOR SIGNS HERE

THE GOVERNMENT HAS provided signs for those farmers who have cooperated with the Soil Erosion Service in the erosion control and land-use program, which read: "KEEP SOIL AND WATER ON THE FARM--COOPERATE WITH SOIL EROSION SERVICE." These

signs are your signs, and if you are a cooperator, get your sign from the Soil Erosion Service warehouse in High Point whenever it meets with your convenience. You can show that you are willingly cooperating by getting your sign and putting it up in some conspicuous place on the farm. There is but a limited number of these notices and those who come first will receive them.

DID YOU KNOW THAT....

WINDS CARRIED \$25,000,000 worth of fertile soil from Texas to Nebraska in one year?

MORE THAN 126,000,000 POUNDS of soil, at a loss of more than \$200,000,000, is removed each year by erosion?

APPROXIMATELY 140,722 FOREST FIRES, burning 43,889,820 acres, for an estimated loss of \$60,274,960, occurred in this country in 1933?

OF THE 6,250,000 FARMS in the United States not more than 16% are located on all-weather roads?

THE CALF PATH

One day through the primeval wood,
A calf walked home as good calves should,
But made a trail all bent askew,
A Crooked trail, as all calves do.

Since then three hundred years have fled,
And I infer the calf is dead;
But still he left behind his trail,
And thereby hangs my moral tale.....

A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way,
And lost one hundred years a day;

For thus such reverence is lent
To well-established precedent.....
For men are prone to go it blind
Along the calf-paths of the mind;

And work away from sun to sun
To do what other men have done.
They follow in the beaten track,
And out and in, and forth and back;

And still their devious course pursue,
To keep the path that others do.
They keep the path a sacred groove,
Along which all their lives they move.

But how the wise old wood-gods laugh,
Who saw the first primeval calf.
Ah, many things this tale might teach----
But I am not ordained to preach.

.....Sam Walter Foss
Bethany, Missouri



UNITED STATES
DEPARTMENT OF THE INTERIOR
Soil Erosion Service
High Point, N. C.
Official Business

Penalty for private use
to avoid payment of
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